

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior listings of claims.

41. (Previously Presented) An apparatus for drying hands, comprising:
- a blower for generating an air jet,
 - where the blower is a two stage blower, and
 - where the blower is driven by an electric motor, and
 - a heater for increasing temperature of said air jet, and
 - an air outlet having a longitudinal axis, the air outlet outputting said air jet, and,
 - where said outlet is tubular with an open end for said air jet to exit along the longitudinal axis, and
 - where said air outlet is circular, and
 - where said air outlet has a diameter between 0.5 inches to 1.25 inches, and
 - where said air outlet has a length 3 to 5 times as large as said air outlet diameter, and
 - where said air jet flow is no less than 18,000 linear feet per minute, and
 - where said air jet at said air outlet has a pressure force of about 50 inches of water pressure height at said outlet, and has 20 inches of water pressure height at a distance of 6 inches from said air outlet, and
 - where said air jet is heated, and is at a temperature of approximately 135 deg. F at 4 inches from said air outlet, and
 - a sound absorbing portion including an array of sound absorbing projections, said projections having a height of about 0.25 inches and spaced apart by 1/3 of the height, and
 - whereby said air jet blows off at least 75% of the water from said hands in less than 3 seconds, and

whereby said air jet breaks up a stagnation boundary layer on said hands and aids in evaporation of remaining water, and

whereby said hands are dried in less than 15 seconds, and

whereby when dried, said hands have less than 0.3 grams of water remaining on said hands, and

whereby immediately after drying, said hands do not cool due to evaporation of remaining water.

42. (Previously Presented) An apparatus for drying hands, comprising:

a blower for generating an air jet,

where the blower is a two stage blower, and

where the blower is driven by an electric motor, and

a heater for increasing temperature of said air jet, and

an air outlet having a longitudinal axis, the air outlet outputting said air jet, and,

where said outlet is tubular with an open end for said air jet to exit along the longitudinal axis, and

where said air outlet is circular, and

where said air outlet has a diameter between 0.5 inches to 1.25 inches, and

where said air outlet has a length 3 to 5 times as large as said air outlet diameter, and

where said air jet flow is no less than 18,000 linear feet per minute, and

where said air jet at said air outlet has a pressure force of about 50 inches of water pressure height at said outlet, and has 20 inches of water pressure height at a distance of 6 inches from said air outlet, and

where said air jet is heated, and is at a temperature of approximately 135 deg. F at 4 inches from said air outlet, and

where said dryer is mounted on the wall, and said air jet is angled towards the wall so that said water blown off is blown away from the user, and

whereby said air jet blows off at least 75% of the water from said hands in less than 3 seconds, and

whereby said air jet breaks up a stagnation boundary layer on said hands and aids in evaporation of remaining water, and

whereby said hands are dried in less than 15 seconds, and

whereby when dried, said hands have less than 0.3 grams of water remaining on said hands, and

whereby immediately after drying, said hands do not cool due to evaporation of remaining water.

43. (Previously Presented) An apparatus for drying hands, comprising:

a blower for generating an air jet,

where the blower is a two stage blower, and

where the blower is driven by an electric motor, and

where said motor is a brush type motor with a thermistor resistor in series with the brushes to limit the starting current in order to extend said brush life, and

a heater for increasing temperature of said air jet, and

an air outlet having a longitudinal axis, the air outlet outputting said air jet, and,

where said outlet is tubular with an open end for said air jet to exit along the longitudinal axis, and

where said air outlet is circular, and

where said air outlet has a diameter between 0.5 inches to 1.25 inches, and

where said air outlet has a length 3 to 5 times as large as said air outlet diameter, and

where said air jet flow is no less than 18,000 linear feet per minute, and

where said air jet at said air outlet has a pressure force of about 50 inches of water pressure height at said outlet, and has 20 inches of water pressure height at a distance of 6 inches from said air outlet, and

where said air jet is heated, and is at a temperature of approximately 135 deg. F at 4 inches from said air outlet, and

where said dryer is mounted on the wall, and said air jet is angled towards the wall so that said water blown off is blown away from the user, and

a sound absorbing portion including an array of sound absorbing projections, said projections having a height of about 0.25 inches and spaced apart by 1/3 of the height,

whereby said air jet blows off at least 75% of the water from said hands in less than 3 seconds, and

whereby said air jet breaks up a stagnation boundary layer on said hands and aids in evaporation the remaining water, and

whereby said hands are dried in less than 15 seconds, and

whereby when dried, said hands have less than 0.3 grams of water remaining on said hands, and

whereby immediately after drying, said hands do not cool due to evaporation of remaining water.

44. (New) An apparatus for drying hands, comprising:

a blower for generating an air jet,

where the blower is driven by an electric motor, and

a heater for increasing temperature of said air jet, and

an air outlet for outputting said air jet, where said air jet flow is no less than 18,000 linear feet per minute.

45. (New) An apparatus for drying hands, comprising:

a blower for generating an air jet,

where the blower is driven by an electric motor, and

a heater for increasing temperature of said air jet, and

an air outlet having a longitudinal axis, the air outlet outputting said air jet, and

where said air outlet is tubular with an open end for said air jet to exit along the longitudinal axis, and

where said air outlet has a cross sectional dimension between 0.5 inches to 1.25 inches, and

where said air outlet has a length 3 to 5 times as large as said air outlet cross sectional dimension.

46. (New) The apparatus for drying hands of claim 45 wherein:

said air jet flow is no less than 18,000 linear feet per minute, and

said air jet at said air outlet has a pressure force of about 25 inches of water pressure height at said outlet, and

said air jet is heated, and is at a temperature of approximately 130 deg. F at 4 inches from said air outlet.

47. (New) The apparatus for drying hands of claim 46 wherein:

said air jet blows off a portion of the water from said hands in less than 3 seconds, and

whereby said air jet breaks up a stagnation boundary layer on said hands and aids in evaporation of remaining water.

48. (New) The apparatus for drying hands of claim 47 wherein:

where said motor is a brush type motor with a thermistor resistor in series with the brushes to limit the starting current in order to extend said brush life, and

49. (New) The apparatus for drying hands of claim 44 wherein:

where said dryer is mounted on the wall, and said air jet is angled towards the wall so that said water blown off is blown away from the user.

50. (New) A method of operating a dryer having a blower driven by a motor, the method comprising:

initiating a blow-off phase, wherein said blow-off phase disrupts a stagnation boundary layer on a surface of the hands;

initiating an evaporation phase, wherein said evaporation phase promotes evaporation of water from a surface;

wherein said blow-off phase has a duration of about 2 to about 3 seconds;
wherein said evaporation phase has a duration of about 8 to about 12 seconds;
wherein the dryer includes a heater, operating the heater at least during said evaporation phase to provide an airstream having a temperature of approximately 130 deg. F at 4 inches from an air outlet.